

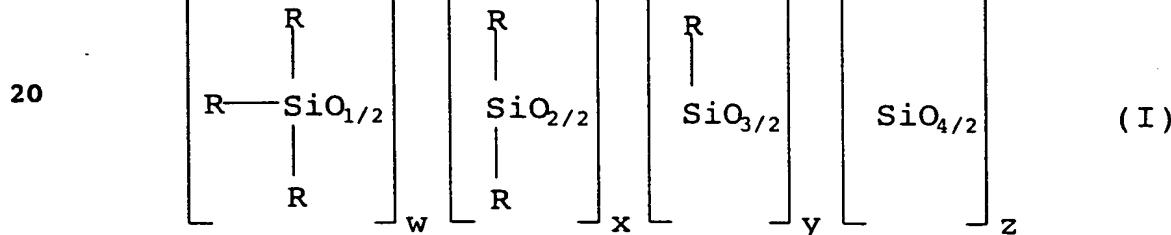
REPLACED BY
AFT 34 ANDT

We claim:

5 1. An additive mixture comprising,

- i) as component A, at least one polysiloxane antifoam and
- ii) as component B, at least one partially or completely neutralized fatty acid, a long-chain carboxylic acid, an ester of such a carboxylic acid or a mixture comprising 10 at least one of these compounds.

15 2. An additive mixture as claimed in claim 1, which comprises, as component A, at least one polysiloxane of the general formula I



25

where

the R radicals are each independently an R¹, R², R³, R⁴ or R⁵ radical where

30 R¹ is an aromatic or saturated aliphatic hydrocarbon radical,

R² is an organic polyol,

R³ is a polyether radical,

R⁴ is a phenol radical,

35 R⁵ is an R² radical, except that some or all of the hydroxyl groups have been converted to diesters, diethers, acetals and/or ketals,

w = 2 + y + 2 z,

40 y and z are each independently a number from 0 to 2 where the sum of y and z corresponds to a number from 0 to 2 and w + x + y + z = from 20 to 60.

REPLACED BY
 ART 34 ANDT

16

3. An additive mixture as claimed in claim 2, wherein, in component A,
 R^1 is C_1-C_{24} -alkyl, C_3-C_{24} -cycloalkyl, C_4-C_{24} -alkylcycloalkyl, C_6-C_{10} -aryl or C_7-C_{18} -arylalkyl,

5

R^2 is a saturated or unsaturated, branched or unbranched, aliphatic hydrocarbon radical which is substituted by at least two hydroxyl groups and is optionally interrupted by one or more oxygen atoms,

10

R^3 is a polyether radical which contains at least 50% by weight of copolymerized ethylene oxide units and has a molecular weight of up to 1500,

15

the quotient of the number of R^1 groups to the number of R^2 groups (R^1/R^2) is from 3 to 19 and

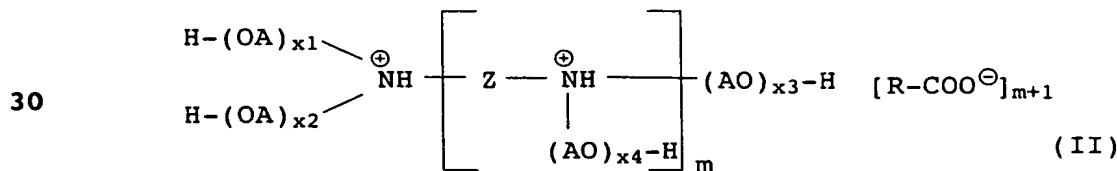
the quotient of the sum of the number of R^3 , R^4 and R^5 groups to the number of R^2 groups $[(R^3+R^4+R^5)/R^2]$ is from 0 to 2.

20

4. An additive mixture as claimed in any of the preceding claims, wherein component B comprises at least one fatty acid neutralized by at least one amine.

25

5. An additive mixture as claimed in claim 4, wherein component B comprises at least one fatty acid salt of the formula II



35

where

R is C_7-C_{23} -alkyl or mono- or polyunsaturated C_7-C_{23} -alkenyl, each of which are optionally substituted by one or more hydroxyl groups;

40

A is C_2-C_8 -alkylene;

Z is C_1-C_8 -alkylene, C_3-C_8 -cycloalkylene, C_6-C_{12} -arylene or C_7-C_{20} -arylalkylene;

45

m is a number from 0 to 5; and

REPLACED BY
ART 34 AMDT

17

x¹, x², x³ and x⁴ are each independently a number from 0 to 24,

5 and optionally at least one further fatty acid RCOOH where R is as defined above.

6. An additive mixture as claimed in any of claims 1 to 3, wherein component B comprises at least one saturated or unsaturated mono- or polycarboxylic acid having from 4 to 50 carbon atoms or at least one ester of such a carboxylic acid with a mono- or polyhydric alcohol having from 1 to 20 carbon atoms and from 1 to 8 hydroxyl groups.
- 15 7. An additive mixture as claimed in any of the preceding claims, wherein component A and component B are present in a weight ratio of from 1:200 to 1:10.
- 20 8. The use of an additive mixture as defined in any of the preceding claims for additizing fuel compositions.
9. The use as claimed in claim 8 for improving the antifoam performance of a fuel composition.
- 25 10. A fuel composition comprising a majority of a hydrocarbon fuel and an effective amount of an additive mixture as defined in any of claims 1 to 7, and optionally at least one further additive.
11. A fuel composition as claimed in claim 10 or the use as 30 claimed in claim 8 or 9, wherein the fuel is diesel fuel, heating oil or kerosene.
12. A fuel composition or the use as claimed in claim 11, wherein the diesel fuel is one obtainable by refining, coal 35 gasification or gas liquefaction, or a mixture thereof with renewable fuels.
13. An additive concentrate comprising an additive mixture as defined in any of claims 1 to 7 and at least one diluent and 40 also optionally at least one further additive.

Abstract

The present invention relates to an additive mixture comprising
5 at least one polysiloxane antifoam and at least one partially or
completely neutralized fatty acid, and also to a fuel composition
and an additive concentrate, each of which comprise this
composition.

10

15

20

25

30

35

40

45